Amendment to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (Previously Presented) **A method for a first machine having a private network address on a private network, wherein the private network address is subject to network address translation (NAT), to communicate with a second machine external to the private network without breaking a protocol utilized for communication between the first and second machines, the method comprising:**

receiving network configuration data that is not subject to NAT from a network configuration server external to the private network;

embedding the received network configuration data and a destination address associated with the second machine in a data portion of a packet;

sending the packet from the first machine to the second machine via the network configuration server based at least in part on the network configuration data and the destination address.

~~A method, comprising:~~

~~a first machine communicating with a second machine using a protocol that sends the first machine's network configuration data in an application data sent to the second machine via a translating access point;~~

~~receiving from a network configuration server a network configuration not subject to translation by the translating access point; and~~

~~providing according to the protocol said received network configuration to the second machine so that said communicating may traverse the translating access point~~

~~which translates network traffic so as to apparently originate from the access point without breaking the protocol.~~

2. (Original) The method of claim 1, wherein the network configuration data comprises a network address, the method further comprising:

establishing a tunnel ~~with~~ **between** the first machine **and the network configuration server** for receiving network traffic sent to the network address.

3. **(Canceled)**

4. (Original) The method of claim 1, wherein the protocol is a selected one of an audio protocol, a visual protocol, and audiovisual protocol, and a telecommunication protocol.

5. **(Canceled)**

6. **(Currently Amended)** A method for communicating through an access point coupling plural machines on a first network to a second machine on a second network by ~~translating~~ **performing network address translation (NAT) on** first network traffic ~~so as to apparently originate from the access point~~, **the method** comprising:

receiving a request for a first address of a first machine on the first network;

allocating a second address from a server on the second network;

providing the second network address in response to the request;

transmitting through the access point at least one network packet having a header comprising a packet origin, and a data payload comprising the second network address;

translating the header of the packet by the access point of the packet origin ~~so that the network packet apparently originates from the access point~~; and

using the second network address in the payload of the packet to provide a network configuration for a communications exchange.

7. (Original) The method of claim 6, further comprising:

establishing a tunnel between the first machine and the server; and

the first machine receiving, through the tunnel, network traffic sent to the second address.

8. (Original) The method of claim 7, wherein the access point performs selected ones of: network address translation, and port translation on the at least one network packet.

9. **(Currently Amended)** The method of claim 6, further comprising:

providing a network address translation (NAT) based router between the first machine and the second machine ~~so that~~ **to perform NAT translation on** communication between said first and second machines is NAT translated at least once.

10. (Original) The method of claim 9, wherein the NAT based router is the access point.

11. (Original) The method of claim 6, further comprising:

communicatively coupling the server to the second network such that network traffic from the server reaches the second network without translation.

12. (Original) The method of claim 11, wherein the second network is the Internet.

13. (Original) The method of claim 6, wherein the packet origin address is the first network address.

14. (Original) The method of claim 6, further comprising:

executing a networking application program, said program issuing the request for the first address of the first machine, and storing said provided second address as the data payload;

wherein the networking application program is unaware of said translating.

15. (Original) The method of claim 6, wherein the first machine comprises:

a network interface communicatively coupled to the first network;

a first memory for storing an operating system providing network services; and

a second memory for storing a network driver communicatively coupling the network interface to said network services, said network driver performing said allocating the second address, and providing the second address responsive to the request for the first address.

16. (Original) The method of claim 15, further comprising:

executing a networking application program which issues the request for the first address; and

the network driver providing the second network address responsive to said networking application program request.

17. (**Currently Amended**) A method for **a** machine[[s]] on an internal network to utilize **a** protocol[[s]] embedding **a** machine network address[[es]] within network traffic data when such traffic routes through an access point that **performs network address translation on the machine network address** ~~shares a single address on an external network with said machines~~, the method comprising:

receiving **at an external server** first network traffic from a network driver executing on ~~a first~~ **the** machine of the internal network~~, said first traffic having an apparent origin of the single address~~;

allocating an external address on ~~the second~~ **an external** network;

providing the external address to [[a]] **the** network driver of the first machine using a payload portion of a data packet; and

establishing a tunnel **from the external server** through the access point to the network driver ~~so that~~ **to allow** network traffic [[for]] **sent to** the external address [[is]] **to be** received by the network driver.

18. **(Currently Amended)** The method of claim 17, further comprising:

receiving second network traffic from an application program executing on the first machine, ~~said second traffic having an apparent origin of the access point, and~~ **the second traffic including** a data **packet** payload encoding an identified address determined by the application program for the first machine.

19. **(Currently Amended)** The method of claim 18, wherein the application program is a telecommunication program, the method further comprising:

contacting by the ~~network driver of a call handling~~ **the external** server on the external network, said server performing said allocating the external address and establishing the tunnel;

initiating a call by said program to an endpoint;

notifying said server of said initiating;

establishing said call to the endpoint by said server;

notifying the network driver of success/failure of said establishing; and

notifying said program of said success/failure.

20. (Original) The method of claim 19, wherein:

the application program telecommunicates with the network driver; and

the endpoint telecommunicates with the server.

21. (Original) A method for a first machine on an local area network (LAN) to communicate with a wide area network (WAN) through an access point configured to ~~alter~~ **perform network address translation (NAT) on** LAN network traffic ~~so that it appears to originate from the WAN~~, the method comprising:

providing layer-based network services including an application layer, a network driver layer, and a session layer, wherein **a network driver of** said **network** driver **layer** is called before said session layer;

executing an application program configured to identify a first address of the first machine, embed said identified first address within network traffic data, and send said network traffic data to a communication endpoint;

providing a WAN address to said **application** program ~~so that said~~ **to allow said application** program ~~can~~ **to** embed the WAN address within the network traffic data; and

establishing a first communication session between said **application** program and said driver, a second communication session between said driver and the server, and a third communication session between the server and the said **communication** endpoint.

22. (Original) The method of claim 21, further comprising:

contacting a server on the WAN to obtain the WAN address;

receiving a call setup from said **application** program for the endpoint;

establishing a call from the server to the **communication** endpoint;

connecting said ~~program~~ call to said driver; and

transparently forwarding said ~~program~~ call by said driver to the server.

23. (Original) The method of claim 21, wherein the session layer comprises the Microsoft Winsock Application Programming Interface.

24. (Original) The method of claim 21, wherein said network services are arranged according to the ISO/OSI model.

25-27. **(Canceled)**

28. **(Currently Amended)** An apparatus for communicating through an access point coupling plural machines on a first network to a second machine on a second network by ~~translating~~ **performing network address translation (NAT) on** first network traffic ~~so as to apparently originate from the access point~~, comprising a readable medium having instructions encoded thereon for execution by a processor, said instructions capable of directing the processor to perform:

receiving a request for a first address of a first machine on the first network;

allocating a second address from a server on the second network;

providing the second network address in response to the request;

transmitting through the access point at least one network packet having a header comprising a packet origin, and a data payload comprising the second network address;

~~translating the header of~~ **performing network address translation (NAT) on** the packet by the access point of the packet origin ~~so that the network packet apparently originates from the access point~~; and

using the second network address in the payload of the packet to provide a network configuration for a communications exchange.

29. (Original) The apparatus of claim 28, said instructions comprising further instructions capable of directing the processor to perform:

establishing a tunnel between the first machine and the server; and

the first machine receiving, through the tunnel, network traffic sent to the second address.

30. (Original) The apparatus of claim 28, wherein a network address translation (NAT) based router between the first machine and the second machine translates communication between said first and second machines.

31. (Original) The apparatus of claim 30, wherein the NAT based router is the access point.

32. (Original) The apparatus of claim 28, said instructions comprising further instructions capable of directing the processor to perform:

executing a networking application program, said program issuing the request for the first address of the first machine, and storing said provided second address as the data payload;

wherein the networking application program is unaware of said translating.

33. **(Currently Amended)** A system for machines on an internal network to utilize protocols embedding machine network addresses within network traffic data when ~~such~~ **routing the network** traffic ~~routes~~ through an access point that ~~shares~~ **translates internal network addresses into** a single address on an external network ~~with said machines~~, the ~~method~~ **system** comprising:

receiving means for receiving first network traffic from a network driver executing on a first machine of the internal network~~, said first traffic having an apparent origin of the single address~~;

allocating means for allocating an external address on the second network;

providing means for providing the external address to ~~a~~ **the** network driver of the first machine using a payload portion of a data packet; and

establishing means for establishing a tunnel through the access point to the network driver so that network traffic for the external address is received by the network driver.

34. **(Currently Amended)** The system of claim 33, further comprising:

receiving means for receiving second network traffic from an application program executing on the first machine~~, said second traffic having an apparent origin of the access~~

~~point,~~ and a data payload encoding an identified address determined by the application program for the first machine.

35. **(Currently Amended)** The system of claim 34, wherein the application program is a telecommunication program, the system further comprising:

means for contacting by the network driver of a call handling server on the external network, said **call handling** server performing said allocating the external address and establishing the tunnel;

initiating means for initiating a call by said **application** program to an endpoint;

notifying means for notifying said **call handling** server of said initiating;

establishing means for establishing said call to the endpoint by said server;

notifying means for notifying the network driver of success/failure of said establishing; and

notifying means for notifying said **application** program of said success/failure.

36-37. **(Canceled)**